

ABSTRACT OF THE DISCLOSURE

A fimbrial agglutinin preparation is prepared from a Bordetella strain, particularly a B. pertussis strain, by a multiple step procedure involving extraction of the fimbrial agglutinogens from cell paste and concentrating and purifying the extracted material. The fimbrial agglutinin preparation may be used to prepare acellular pertussis vaccines with other pertussis antigens, including pertussis toxin or toxoid thereof, the 69 kDa protein and filamentous haemagglutinin and other Bordetella antigens. Such vaccines confer protection to at least 70% of an at-risk human population.